

1974

ANNUAL NARRATIVE REPORT - FY 74
SWAN LAKE NATIONAL WILDLIFE REFUGE
SUMNER, MISSOURI 64681

PERSONNEL

<u>Name</u>	<u>Title</u>
Alfred O. Manke	Refuge Manager
Larry T. Keck	Assistant Refuge Manager
Marvin F. Lentz	Refuge Clerk
Benny N. Howerton	Med. Equipment Operator
Bennie M. Hull	Biological Technician
Ervin Windsor	Laborer
Stuart L. Burnside	Biological Aid

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I GENERAL

A&B Weather and Habitat Conditions

Floods, drouth, heat, cold and wind teamed with shortages and inflation to significantly affect refuge activities and wildlife populations. A hot, dry period in August reduced corn and buckwheat yields, but produced conditions favorable for sowing wheat. Although conditions were favorable for sowing wheat fuel shortages caused delays. A flood in late September and early October killed all 1,200 acres of wheat sown which caused an acute shortage of browse. It also permitted ducks and geese to glut themselves in flooded corn and buckwheat fields thereby depleting the food supply more rapidly than normal. Further, it damaged roads and dikes which caused more effort and expense to ready the refuge for "Open House" and hunting; and cancelled numerous field trips scheduled for school classes. Mild, dry weather followed this flood and allowed off-refuge fields to be harvested and subsequently minimize crop depredations from the 185,000 geese in the Swan Lake Zone.

Winter arrived with a blast. Temperatures remained below freezing for 21 consecutive days with the coldest being a -25 degrees. Snow accumulation halted stalk-chopping in corn fields. This prevented making available some much needed food for geese, and subsequently delayed spring farming operations. It also caused a severe winter-kill of fish and dispersed geese. This dispersion widened the area of depredations complaints to some 35 miles away from the refuge. The winter-kill of fish prompted much local criticism and bad publicity. On the other hand it provided a bonanza for eagles, crows, coyotes and raccoons; and reduced an over-abundance of rough fish that were largely credited for the lack of aquatic vegetation in the shallow impoundments.

Mild weather with strong southerly winds in late February and March seemed to hasten spring migrations through the area. It also dried the soil enough to make dike repairs and get an early start with farming operations. Inflationary prices of seed and fertilizer resulted in greatly reduced amounts of fertilizer being applied, and therefore greatly reduced yields of corn and sorghum anticipated. A planned deficit so to speak. A June flood all but wiped out all that had been accomplished. By the time the flood waters receded only short season corn could be planted, and expenses and shortages precluded further fertilization.

At best we could only hope for a poor crop; a crop that we knew would be insufficient to feed the number of geese expected to return to the refuge.

II WILDLIFE

A. Migratory Birds

1. Waterfowl

Total waterfowl use days amounted to approximately 20.5 million. This is about four million short of the objective.

Geese returned as programmed. A peak of 137,000 Canada and 25,000 snow geese was reached. Goose use days amounted to about 15 million; almost two million short of the target. This shortage is attributed primarily to three conditions. First, the flooded browse caused geese to disperse in search of greens despite their premature gluttonous devastation of refuge corn fields. Second, the harshness of the winter weather with ice and snow accumulations a foot or more deep coupled with a shortage of available food caused many to seek refuge along the Missouri River. Third, an abbreviated spring migration period brought on by above normal temperatures and strong southerly winds on which to ride northward.

Duck use days amounting to almost 5.5 million also fell short of the objective by almost two million. The peak of approximately 120,000 was reached rather early, and below expectations. Two factors are thought to be the primary causes. First, the flood submerged aquatic vegetation in refuge pools too deeply for optimum utilization, and coincidentally flooded off-refuge areas making them attractive to ducks which prompted wide-spread dispersal. Second, mallards did not arrive on the scene until almost all other ducks had departed. These two factors also significantly reduced total use days as did the harsh winter weather and spring blow-through.

2&3 Water and Shorebirds

Populations and species of birds within these broad categories were considered normal with few exceptions. White pelicans were less abundant and did not tarry as long as they normally do in either their fall or spring migrations. Another exception was having 26 cattle egrets throughout much of October. In previous years very few cattle egrets have visited the refuge. Also, two American avocets stayed on the refuge for about 15 days in November.

4. Doves

Population, reproduction and migration all seemed normal. Dove use days amounted to one million with a peak population of about 5,000.

B. Upland Game Birds

Twenty-one eastern wild turkeys had been released on the refuge by the State in January 1973. Shortly after their release a flood scattered them and probably caused some mortality. Infrequent sightings, however, indicated at least a few were making the refuge home base. Nine more were released in March 1974. Sightings of turkeys have been frequent enough to encourage hope that they will become established on the refuge.

Bobwhite quail, the only other upland game bird inhabiting the refuge, remained quite plentiful throughout the year.

C. Big-Game Animals

White-tailed deer is the only species of big-game animals utilizing the refuge. The population varied between 400 and 600 animals. All that were seen and/or captured seemed healthy and in good condition. Most does produced twin fawns, and one was seen with triplets. During the summer the deer seem to live in corn fields as much or more than in timbered areas. Floods displaced deer twice during the year, but the return of deer marked as part of a deer-movement study indicates the majority return to the refuge as flood waters recede. Despite this, quite a few marked deer do show up in the hunters' bag outside the refuge. Deer hunting is not permitted on the refuge.

D. Fur Animals, Predators, Rodents, and Other Mammals

Few fur animals inhabit the refuge. Most noticeable and those exerting the most impact on the refuge are beavers. Their sphere of operations now include Elk Creek below the outlet structures of Silver Lake. Their low dam across the channel has caused no damage or interference as yet. In fact, in some ways it is a benefit, and it certainly provides a point of interest for refuge visitors, especially school groups. The raccoon population is at an acceptable level; large enough to provide sightings and interest, and small enough to cause no serious problems. Their biggest mistake is attracting illegal 'coon hunters into the refuge. Muskrats continue to be scarce.

Coyote sightings decreased from the high of the previous year, but upwards of a dozen were seen resting on the frozen lakes throughout the winter. Coyote predation is not considered excessive or unduly harmful. No fox sightings occurred for the fourth year in a row.

Cottontail rabbits, fox squirrels and grey squirrels continue to be abundant in suitable habitat. Squirrels seem to thrive on corn when acorn and nut crops are slim or depleted.

E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies

Hawk and eagle migrations coincided closely with waterfowl arrivals and departures with many more here during the winter than the summer. Hawks were not as numerous as they have been in previous years but the eagle population equalled or bettered those in recent years. Sixty-six eagles were recorded on the mid-winter count conducted January 7. Usually hawks outnumber eagles by about 5 to 1, but the ratio dropped to about 3 to 1. Eagles and to a lesser extent hawks do harass ducks and geese, but their predatorial pressure is considered well within toleration limits. They seem content to feed on goose carcasses rather than make any fresh kills. Eagles fed almost exclusively on dead fish after the severe winter-kill occurred. The dead fish also attracted crows. An estimated 1,000 crows gathered on the refuge to feed on the fish. Normally we see only about 100. There was no noticeable change in owl populations.

F. Other Birds

Nothing unusual to report.

G. Fish

Refuge waters are suitable for and support primarily rough fish. Some channel catfish and crappie are taken in the spring, but they are really minority species. An estimated 50,000 to 60,000 fish died in the winter-kill. Some natural restocking occurred during a spring flood, but no other restocking was attempted. Fishing pressure and success were normal in Silver Lake and streams below structures which suffered no winter-kill. A little over two tons of rough fish were removed during the three-day seining season.

H. Reptiles

Few reptiles inhabit the refuge. Very few snakes and turtles were seen.

I. Disease

Nothing to report.

J. Rare and Endangered Species

Apparently all attempts to reintroduce prairie chickens have failed. No sightings or evidences of prairie chickens were noted.

Swan Lake Refuge lies within the designated range of southern bald eagles, but indications are that the majority of bald eagles utilizing the refuge are of the northern race. A study now in

progress may help clarify whether or not southern bald eagles do indeed inhabit the refuge. Of the 66 eagles recorded on the mid-winter count, 65 were bald eagles. The other one was an immature golden eagle.

III REFUGE DEVELOPMENT AND MAINTENANCE

A metal grain bin was erected for safer, better, more convenient wheat storage. The metal bin eliminates much manual handling, and prevents losses and soilage of seed by rodents and birds. Previously, wheat had to be stored in an open bin in an old barn that is no longer considered safe for such storage. A flood-damaged dike was repaired and reinforced with rip rap to preclude loss of dike and entrance road. Wave action had eroded the lake-side slope back to the edge of the gravel road for two-tenths of a mile. Cracks in the road indicated imminent danger of complete collapse. Almost continual "trouble" with the water system was solved by replacement of a suction-type well pump with a submersible pump. Underground electrical cable and pad-mounted transformer were installed to improve electrical service and eliminate overhead power lines. A federal subsidy via Federal Flood Control Damage money permitted the Missouri Department of Conservation to repair and regravels service roads on the refuge that are under State control.

All other categories falling within this major heading were considered more or less normal and need no further documentation.

IV RESOURCE MANAGEMENT

All categories negative.

V FIELD INVESTIGATION OR APPLIED RESEARCH

A. Progress Report

1. A deer-movement study in its third year is being conducted primarily by the Missouri Department of Conservation with aid from the Missouri Wildlife Research Unit. The study involves following movements of individual deer on and off the refuge through markings and transmitters. Captures are made with box traps and cannon nets. Data collected to date leads State Biologists to believe that the refuge can serve the deer herd and deer hunters best by holding it closed to deer hunting.

2. An eagle-waterfowl relationships study in its first year is being conducted by a graduate student working under the Missouri Wildlife Research Unit. To date, field observations and pellet cast collections and analysis have been made. The study provides for capture, marking, and placing transmitters on birds upon procurement of materials and proper clearance to proceed.

3. Canada goose banding and fluoroscopy continued as per the last "quota" published; 1,500 pre-season and 1,500 post-season. State Biologists have requested Patuxant to provide the number necessary for a valid statistical sample for a flock of the present size. Fluoroscopy shows about 40 percent of the adults and 15 percent of the immatures carry imbedded shot. The record so far was one Canada goose with 38 pellets and six fragments imbedded in its flesh, and in apparent good health.

VI PUBLIC RELATIONS

Total refuge visitors decreased from a record high of 133,000 in FY 73 to 92,000 in FY 74. It is thought the fuel shortage "crunch" caused much of this decline. At least a small part can be attributed to the switch away from non-wildlife oriented recreation on the refuge. The winter-kill of fish had some effect as did the short duration of the goose hunting season. Untimely floods, however, during normally high visitor use periods contributed largely to the drop in number of visitors. "Open House" held the Sunday just prior to the opening of the waterfowl season continued to be our best public relations program.

The refuge with its large concentration of Canada geese and refuge participation played an important part in the community's adoption to erect the world's largest statue of a Canada goose as its Bicentennial project.

Hunting

In FY 73 the Canada goose harvest quota was 14,000. The season lasted 22 days with a total of 13,917 Canada geese harvested of which 2,543 were taken on the refuge by 3,788 hunters. In FY 74 the quota was 17,500. The season lasted 14 days with a total of 19,207 being harvested of which 2,140 were taken on the refuge by 2,780 hunters. The post season population estimate in FY 73 was 165,000. In FY 74 it was 170,000. Minnesota, Iowa and Missouri have curtailed harvests for several years in an attempt to increase the Eastern Prairie Population of Canada geese to a post season level of 200,000. Band returns during this same period indicate a rapid increase in the number of geese harvested in Canada.

Safety

No lost-time accidents occurred during the year bringing the total to 3,363 days since the last one. Halleluyah! The refuge manager attended a five-day Safety Workshop and as a result many safety hazards have been corrected, but there are still far too many yet to be corrected to allow any complacency or relaxation.

VII OTHER ITEMS

Mr. Bennie M. Hull received a well deserved promotion when the Biological Technicians position was upgraded from GS-5 to GS-6. Mr. Marvin F. Lentz, Refuge Clerk since 1947, completed 30 years of Federal Service February 22, 1974. Congratulations to both of these gentlemen on their accomplishments.

SIGNATURE PAGE

Submitted by:

Alfred P. Markie
(Signature)

Date: January 30, 1975
Title: Refuge Manager

Approved, Area Manager

Date: _____

(Signature) _____

Concurrence

Date: _____

(Signature) _____
Chief, Division of Land Management

PLANNING AND ACCOMPLISHMENT NARRATIVE

SWAN LAKE NATIONAL WILDLIFE REFUGE

SUMNER, MISSOURI 64681

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Alfred O. Manko	Refuge Manager
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Ervin Windsor	Laborer
Stuart L. Burnside	Biological Aid
Stephen L. Judy	Biological Aid (Resigned 8-3-73)

Approved, Regional Office

Submitted by:

Signature

Title

Date

Alfred O. Manko

Signature
Refuge Manager

Title
January 25, 1974

Date

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Planning and Accomplishment Narrative
Swan Lake National Wildlife Refuge
Sumner, Missouri 64681

January 1, 1973 - June 30, 1973

PART I. REFUGE HIGHLIGHTS

January dawned ice-clad, cold and without electrical power working hardship on man and beast. For more than two weeks ice blanketed the area causing wide spread damage and destruction. Power lines were broken and poles snapped. Trees were stripped to their trunks, and saplings permanently stooped. Geese departed enmasse. All fliable fliers flew. Only eagles with ice-laden wings remained. This catastrophe was followed by floods. About 75 percent of the refuge was inundated throughout much of February. This greatly reduced chances for establishment of wild turkeys and prairie chickens stocked just two weeks prior to the flood. Nor were the elements yet satisfied. Relentlessly they spewed their vengeance. A blizzard on April 9, left a foot of snow on the level and roads clogged with drifts eight feet deep setting the stage for still another flood that inundated 90 percent of the refuge. Seed remained stored and soil untilled until almost mid-June, long past due. All this prompts a variation of an old cliché. To wit, "it's not a good place to visit, and no one could live here."

Just as the weather began favoring us, the beginning of the fuel shortage cast its ominous shadow over farming operations. These adversities were partially overcome through short-cut farming practices, 12-hour work days and six-day work weeks. By July 1, about 700 acres of corn and 150 acres of grain sorghum had been planted, but concern became greater about browse plantings as the fuel shortage became increasingly acute.

A "belt cutting" ceremony was performed on a local dignitary May 25, to signify the plush "flush" comfort station was open for business. Dubbed with the honorary title 'fore flusher, he emerged from the facility with hand-held trousers and satisfied countenance.

PART II. REFUGE ACCOMPLISHMENTS

Wildlife-Wildlands Interpretation

Tour Routes - planned units 1,000: accomplished units 900. This is well within the * or -25 percent, but none was recorded during the reporting period because this activity is seasonal with almost all occurring in September, October and November.

Exhibits-Demonstrations - none planned: accomplished units 20. This was an opportunistic accomplishment. A university wildlife class arrived unannounced, but at the right time to see the goose-trapping operation.

Other Programs - none planned: accomplished units 20. Another opportunistic accomplishment. An unscheduled film-talk was presented. It is extremely difficult to predict and plan just when and how many of these somewhat impromptu opportunities will present themselves.

Environmental Education

Students - planned units 200: accomplished units 300 for the year of which 250 occurred during the reporting period. An unforeseen development occurred when an instructor returned a second time with a different group of students because of the valuable experience experienced by the first group.

Teachers - none planned: accomplished units 13. This is in part because of changes in forms and reporting procedures. In the planning period Environmental Education was a one-line item. It was then changed on the reporting form to two lines; to wit "Students and Teachers" separated.

Professional Services - planned units 100: accomplished units 1616. This is a reporting error in October 1973. A preseason banding quota of 1500 Canada geese was set, and 1594 were banded. In a desire to report accomplishments fully, the 1594 figure was erroneously placed in the "Activity Hours" column. Sorry about that, but more consistent headings between planning and accomplishment forms may eliminate such discrepancies. One form we separate and on the other form we lump.

Wildlife-Wildlands Recreation

Hunting Migratory Birds - planned units 14,000: accomplished units 19,152 for the year, but none during the reporting period. This activity is difficult to guess within the 25 percent accuracy level because the area is on a "harvest-quota" system, and the length of season had varied from 70 days to 14 days during the previous five years.

Other Consumptive Recreation - planned units 4,000: accomplished units 550. Mushroom hunting generates the major share of activity hours within this classification, and floods all but eliminated this activity.

Wildlife Observation - planned units 52,000: accomplished units 67,180 for the year with 13,800 occurring during the reporting period. Either the demand was underestimated, or people who came to view the flooding were erroneously recorded as wildlife observers. It is difficult to predict people, and especially their ghoulish predilections for disaster.

Public Affairs - planned units 19: accomplished units 12. We fell

short because not enough time and effort were devoted to this activity, and several programs we anticipated did not materialize. Also, probably proper records and reporting this activity were wanting.

Professional Services

Studies and Publications - planned units 3: accomplished units 1. This discrepancy seems a matter of poor reporting through lack of clarity in instructions. Three studies were actually in effect for the period but only one was published. A confusing point is what to do about reporting accomplishments during the interim period between conclusion of field work and publication of the study. Often times this period may be a full year. Also, fluoroscopy of geese is a continual on-going study with only brief resumes submitted from time to time because it is primarily a management tool. Another problem exists where a study is set-up, but too little information is learned within the reporting period. Such is the prairie chicken study, but the chickens have all but flown the coop.

Ecological Monitoring - planned units 2: accomplished units none. We overestimated the demand for these services. The pesticide study that required heron, frog, fish, etc. collections seems to have faded from the picture without notification or publication of results, and we were not called upon to help in monitoring air-pollution as anticipated.

Banding - planned units 3: accomplished units 4. Two special studies that required trapping and banding geese beyond those originally planned caused the overage. These two studies were combined as one banding operation since they were done concurrently and the same sample served both. These were unforeseen and unplanned, but done primarily to keep good faith with the Missouri Department of Conservation and also to lend continuity to a research program concerning blood parasites.

Other Cooperative Programs - planned units none: accomplished units 6. This is a case of not realizing certain programs merited listing under this category during the planning of activities, and no benefits anticipated for them until reporting time.

Environmental Preservation

Natural Areas - none planned: accomplished units 1. Although four have been included in refuge objectives for consideration, no credit could be taken until Directorate approval was gained. Approval time was uncertain and therefore not shown as a "planned" benefit or activity. There was nothing more this station could do until the Director's approval was gained. Since the one approved area includes all of the area that had originally been sub-divided into three "Natural Areas", we are still confused as to whether to change refuge objectives or let them ride and hope for the best.

Wildlife

Special Recognition Species - planned units 1,781,000 for the year, not 1,381,000 as shown on the P&A printout: accomplished units 2,185,900 for the year. Planned units were in accordance with refuge objectives based on a five-year average. No changes were made in management practices to encourage more units. We reported them as we saw them, and an above average use occurred.

Waterfowl Maintenance - planned units 28,500,000, but refuge objectives call for 24,410,000 for the year: accomplished units 20,482,080 for the year. Memory fails as to just why 28,500,000 units were planned when objectives call for 24,410,000. No changes were made in management practices to either increase or decrease from refuge objectives. Had the objectives figure 24,410,000 been inserted rather than the 28,500,000, the station would have been within the + or -25 percent target parameters.

Waterfowl Production - planned units 200: accomplished units none. Production was below expectations, but not a complete failure as indicated. Although few broods were seen, neglectful reporting lost this station all benefits. Production is estimated to have been 100. No explanation can be offered as to why normal production did not occur.

Species Transplanted - planned units 64: accomplished units none. In the previous year this station received a Regional Office request for 64 geese. Opinions were expressed that such requests may continue for a few years. No requests were received and therefore our plans went awry although we were ready, willing and able.

Economic Benefits

Depredations Prevented - planned units 100,000: accomplished units 100,000 instead of the 10,000,000 shown on the P&A printout. Being scotch in spirit if not by descent, I hate to think that a million-dollar machine made a mistake; but our file copies show only 100,000 units being reported. The RBU's were calculated correctly for the 100,000 figure so all that was lost is a little confidence in the machine for which we are most thankful.

P.S. We would be even bigger and better grateful to it if it could help us get delivery on road gravel ordered last June, and consummate fuel contracts without which we cannot produce much which subsequently seriously impairs the possibility of submitting many satisfying figures to it next year.

Your obdt. serv.,